

## Ford Settlement

### State Reaches Historic Settlement Agreement with Ford and UAW

On Sept. 2, 1999, the Michigan Department of Consumer and Industry Services (CIS) concluded its investigation of the fatal explosion at the Ford Rouge Complex power plant with an unprecedented and historic \$7 million Settlement Agreement with Ford Motor Company and the UAW.

The tragic explosion was one of the worst automotive industry accidents in Michigan. On Feb. 1, 1999, a catastrophic explosion in the power plant at the Ford Rouge Complex in Dearborn, resulted in the death of six workers and seriously injured 14 others.

This unique and innovative settlement resolution to the Michigan Occupational

Safety and Health Act (MIOSHA) and Bureau of Construction was announced by CIS Director Kathy Wilbur in Detroit. "This historic agreement can never reclaim lost lives or restore injured bodies—but it can ease the suffering of the victims and their families by assuring a safer and healthier work environment for all Ford employees in the future," said Wilbur.

The settlement includes a record \$1.5 million civil penalty, the largest monetary sanction ever levied in Michigan as a result of a MIOSHA investigation. The key elements of the \$7 million agreement include:

- \$1.5 Million-MIOSHA Penalty,
- \$1.5 Million-Establishment of programs to achieve lasting improvements in power generation safety,
- \$1.0 Million-Research to increase the understanding of industrial safety and health,
- \$1.5 Million-Medical research, facilities or equipment in the treatment of burns and other critical care,
- \$1.0 Million-Scholarship Fund, and
- \$0.5 Million-Potential third-party reimbursement.

MIOSHA and BCC inspectors worked cooperatively on this accident to assure that a comprehensive investigation was achieved. "Coordinating these state inspection efforts allowed us to utilize the expertise of our CIS employees to assure a thorough investigation with an emphasis on a safer workplace in the future at Ford," said CIS Director Wilbur.

BCC inspectors were able to establish cause in this incident. They determined the explosion was caused by a natural gas build-up in Boiler No. 6. The build-up was a re-

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*The damage to the Ford Rouge power house from the Feb. 1, 1999, explosion.*

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Consumer and Industry Services

## From the Bureau Director's Desk

*By: Douglas R. Earle, Director  
Bureau of Safety & Regulation*



## Ford Motor Company Agrees to Comprehensive Safety and Health Improvements in Landmark Settlement

The tragic explosion at Ford Motor company's Rouge Powerhouse on Feb. 1, 1999, was one of the worst workplace accidents in Michigan. The accident, which resulted in the death of six workers and serious injury to 14 others, demanded a highly complex and comprehensive investigation by MIOSHA safety officers.

I am extremely proud of the dedication and professionalism of the supervisor and four safety officers assigned to this inspection. Their hard work and unflinching determination as they searched through an almost overwhelming array of evidence was the solid foundation on which we based the historic Settlement Agreement with Ford and the UAW.

Detailing the investigative team for seven months put an extreme burden on all our other safety officers. I'm not only proud of those safety officers, but also of the entire General Industry Safety Division, which responded so diligently to the extra workload generated by this complex inspection.

The MIOSHA investigative team found significant workplace safety and health violations at the time of the explosion and a lack of safe industry practices by Ford. The comprehensive and thorough nature of the investigation identified important deficiencies and unsafe workplace practices.

MIOSHA findings led to the inclusion in the Settlement Agreement of several items which will positively impact the working conditions for Ford employees nationwide. The Department of Consumer and Industry Services expended the necessary resources in this investigation to determine unsafe workplace practices and to identify viable solutions.

This Settlement Agreement is historic in many aspects, including the amount of the civil penalty. The scope of the agreement goes beyond the physical boundaries of the Ford Rouge Complex. The establishment of significant safety and health research, monitoring activities, and training programs, will help Ford provide a safe working environment for its employees nationwide. Ford and the UAW approached MIOSHA during the course of the investigation to seek a constructive way to resolve this tragic

incident. Because all three parties creating the agreement came together voluntarily, a non-adversarial environment evolved with a common goal of protecting workers and improving workplace safety.

When we began this investigation I had three goals:

- First, to fulfill our statutory obligation to investigate the incident and determine if any MIOSHA requirements were violated, and to assure that all identified hazards were abated;

- Second, to find some positive initiatives to address the needs of the families; and

- Third, to forge an agreement that would stress the fundamental importance of workplace safety and health protections.

I believe this innovative agreement more than meets those ambitious goals. This resolution helps provide closure for the victims and their families, the employees and managers of Ford Motor Company, the UAW, and MIOSHA/BCC safety officers, inspectors and staff. It not only represents recognition by the company and the union that safety is the responsibility of all parties—it also represents a landmark approach to resolving the complex safety issues identified in this tragic explosion.

It is our goal in Michigan to help make sure employers do not place their employees at risk of injury or death. We believe this proactive approach to a very tragic event and complex investigation will help set the stage for all Michigan companies to establish leading-edge safety and health programs and policies which will ensure the safety of their employees and provide a work environment that minimizes the risk of accidents.

I am proud of our CIS employees for their contributions to this monumental investigation and proud of the cooperative resolutions of the tragedy. However, as Director, my greatest hope is never to have a worker perish from a workplace exposure to a hazard, and especially never to have an incident happen again, such as occurred at the Ford Rouge power plant. Our hearts and thoughts will always be with the workers, their families, and their loved ones, who have been injured by this tragedy.

*Douglas R. Earle*

# Fireworks Safety

Under CIS Director Kathy Wilbur's leadership MIOSHA addresses fireworks safety issues

## Independence Fireworks

On Dec. 11, 1998, seven workers died in an explosion at Independence Professional Fireworks in Osseo, Michigan. The federal Bureau of Alcohol, Tobacco and Firearms (ATF) licenses explosives manufacturers, and ATF was the lead investigator in the causes of this tragedy. A subsequent explosion occurred at the same location Monday, March 29, 1999, killing five more workers, including the owners.

On April 1, 1999, Consumer & Industry Services (CIS) Director Kathy Wilbur announced that Independence Professional Fireworks was cited for 23 alleged worker safety violations with proposed penalties of more than \$562,500. The complex, three-month-long investigation of the first explosion identified 23 willful, serious and other violations of worker safety rules.

On Sept. 3, 1999, CIS Director Kathy Wilbur announced that Independence Professional Fireworks was cited for four additional worker safety violations for the second explosion, with proposed penalties of \$217,000. "This second explosion shows that there was an utter disregard on the employer's part to protect his workers," said Wilbur. "These explosions illustrate the need for workplace standards to prevent catastrophic incidents involving highly hazardous chemicals."

## The MIOSHA Investigations

Under Michigan Occupational Safety and Health Act (MIOSHA) rules, manufacturers of explosives have responsibilities concerning the use of explosive chemicals. MIOSHA's Process Safety Management of Highly Hazardous

Chemicals (PSM) of 1993 was designed to help prevent catastrophic accidents, when complied with by employers. Company management was made aware of the PSM standard in 1994, but did not implement the life-saving procedures. "MIOSHA promulgated this standard specifically because work with highly hazardous chemicals requires stringent and detailed safeguards to protect workers," said Wilbur.

ATF, the State Police Fire Marshal Division and MIOSHA all conducted investigations of both explosions. Independence Professional Fireworks

**These explosions illustrate the need for workplace standards to prevent catastrophic incidents involving highly hazardous chemicals," said CIS Director Kathy Wilbur.**

voluntarily surrendered its license to ATF after the second explosion. The cause and origin of the first explosion could not be determined by ATF and MSP because of the lack of any surviving witnesses and the total destruction of the building (Building 15)

The MIOSHA investigations were conducted by a team from the CIS Bureau of Safety and Regulation (BSR), which is responsible for the MIOSHA program. MIOSHA investigations do not try to establish cause, but focus on identifying violations of state worker safety standards. Although the company is no longer in operation, it has appealed all citations.

The MIOSHA team consisted of General Industry Safety Division Supervisor John Brennan and Senior Safety Officer Charles Collier, as well as



*The aftermath of the Dec. 11, 1998, fatal explosion at Independence Fireworks, Inc.*

Mike Mason from the Occupational Health Division. Assistant Chief Eva Hatt and BSR Deputy Director Doug Kalinowski also played instrumental roles in the investigations.

## Fireworks Safety Partnership

Under CIS Director Wilbur's leadership, MIOSHA conducted a special safety seminar on June 30, 1999, to alert employers to the hazards in this industry and to prevent comparable occurrences. "We may never know what caused these explosions, but we're making a coordinated effort to reach the manufacturers of explosives and provide them with the training necessary to protect their workers," said Wilbur. "Our thoughts remain with the families of the workers who lost their lives in both explosions."

Twenty-seven companies, licensed by ATF to manufacture explosives in Michigan, were invited to the seminar. The invitees were a diverse group and included: companies which manufacture commercial quantities of fireworks, small companies which manufacture and produce small fireworks displays, companies which manufacture and deliver explosives to mining companies, contractors who use explosives for excavation work, companies who set off small underground charges to map underground rock and oil formations, and an amateur rocketry club.

Rather than focus on only the MIOSHA rules and regulations, the Safety Education & Training Division (SET) forged an innovative partnership with several state and federal offices that regulate the manufacture, storage, and transportation of fireworks—to present an all-inclusive program for attendees. The following workshops were offered.

■ **Martha Yoder**, Division Chief, MIOSHA General Industry Safety Division. MIOSHA regulates workplace safety and health. Yoder presented an overview of general MIOSHA program requirements. (Yoder was a SET Supervisor at the time of the seminar.)

■ **Lee J. Keuppers**, Occupational Safety Consultant, MIOSHA SET Division. Keuppers

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*Fireworks Safety Seminar participants discuss safety concerns with ATF's Jacqueline Darrah.*



# \$850,000 Awarded for Worker Safety Grants

*By: Jerry Zimmerman*  
*SET Grant Administrator*

On Sept. 9, 1999, Governor John Engler announced the Department of Consumer and Industry Services (CIS) had awarded 17 Safety Education and Training (SET) Grants totaling \$850,000 to keep Michigan workers and workplaces safe.

"Michigan's robust economy continues to lead the nation," said Engler. "With more than five million workers on the job, we also want to continue to lead the nation in safe work practices and environments. These grants are an important tool to

Michigan Roadbuilders Association, in Traverse City. This grant will provide special emphasis on the importance of safe work practices for the highway construction industry.

Other grants will provide a wide range of safety and health services, including: safety and health training for young people just entering the workforce, ergonomics health and safety programs, Rapid Intervention Team training for firefighters, and targeted training in high-hazard occupations.

The SET grant program is part of the CIS Bureau of Safety and Regulation, which is responsible for the Michigan Occupational Safety and Health Act (MIOSHA). The MIOSHA program is aimed at increasing workplace safety and health by helping employers and employees meet occupational health and safety standards.

SET grants are awarded on a competitive basis to management/employer groups, labor/employee organizations, and not-for-

## FY 2000 SET Grant Projects

**Alpena Community College** will provide a core of trained safety personnel to conduct safety training seminars for targeted key employers and employees in five high-hazard occupations: manufacturing; farming; construction; health care industries; and maintenance, custodial, secretarial and support staff in publicly funded educational institutions.

**Associated General Contractors** will provide on-site training on health issues in the construction industry. They'll also develop a Construction Health Newsletter for managers and safety directors to alert them to the health problems. The project will develop training topics, including: respiratory protection, hearing protection, lead hazards, and asbestos hazards.

**Bay de Noc Community College / Michigan Technological University** will provide training and services for the wood harvesting (logging) and wood using industry. It will offer on-site presentations to employees and employers with emphasis on employee awareness of hazards, personal protective equipment, chain saw safety, employee safety responsibility, sound ergonomic practices and proper lockout procedures.

**Center for Workplace Violence Prevention** will provide training to small business owners and employees, human resource managers, field personnel in the following areas: personal safety strategies; early warning signs of anger and

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***Brrrrr.....Jerome Smith, a teacher at Golightly Career Technical Center in Detroit, plucks a test tube from liquid nitrogen (minus 320 degrees F) as part of the PASSES EDGE safety workshop.***

help us assure that Michigan's workplaces are safe."

CIS Director Kathy Wilbur said that Michigan has a strong history of promoting workplace safety and health through education and training. "The SET Grant Program strives to protect Michigan's working men and women by focusing our resources on 'Train the Trainer' projects which have the potential of reaching the maximum number of employers and employees," said Wilbur.

The SET grants will fund 17 statewide projects, and are designed to address emerging safety and health issues like workplace violence. Homicides are among the leading causes of death in today's workplace. The Center for Workplace Violence Prevention will provide threat assessment training to small business owners and employees.

Several of the grants provide safety and health training in the high-hazard construction industry. SET Division Chief Maryann Markham, presented a SET grant to one of the grantees, the

profit organizations, such as universities, hospitals and service agencies.

For information on the SET Grant Program or on any of the individual grants, please contact **Jerry Zimmerman, SET Grant Administrator, 517.322.1865.**



***SET Division Chief Maryann Markham (center) presents a SET Grant to (from left) the Michigan Road Builders Association President Tom Irwin; President-elect James Klett; Mike Eckert, Director of Safety Services; and Tony Milo, Executive Vice President.***

# 1998 Census of Fatal Occupational Injuries

By: *Gordon Spitzley, Analyst*  
**MIOSHA Information Division**

The number of fatal work injuries in 1998 rose to 179, about three percent above 174 in 1997, and the highest count since 180 in 1994. The 1998 increase was due mainly to three multiple-fatality work injury accidents. An explosion at a fireworks factory claimed seven workers, a collapsing wall accounted for four fatalities, and three fatalities were recorded during a party store fire. These three accidents resulted in 14 fatalities combined or about eight percent of the year's total.

In contrast, transportation incidents decreased 13 percent in 1998--from 61 in 1997 to 53 in 1998. This is the lowest level for transportation fatalities since the beginning of the Census of Fatal Occupational Injury program in 1992 when 44 transportation incidents were recorded.

## Profiles of 1998 fatal work injuries

**Transportation** incidents including highway crashes continued to be the leading cause of on-the-job fatalities in 1998, accounting for 30 percent of the fatal work injury total. The number of these fatalities in 1998 (53), decreased from the 1997 total (61). The decrease resulted mainly from a drop in the number of workers struck by a vehicle or mobile equipment and the number of work-related aircraft fatalities.

The second leading cause of on-the-job deaths, **Contact with Objects and Equipment** remained relatively stable from 1997 (35) to 1998 (36) recording 20 percent of the total number of fatalities

for both years. Eight percent of the fatalities in this category were the result of workers being struck by an object.

**Assaults and Violent Acts** also remained stable from 1997 to 1998, recording 32 fatalities in each year. Twenty-two fatalities or 12 percent of the total were the result of homicides in 1998, down from 26 homicides in 1997. Shootings also decreased from 1997 to 1998, recording 24 and 17 respectively. The number of self-inflicted injuries increased in 1998 to 10 from six in 1997.

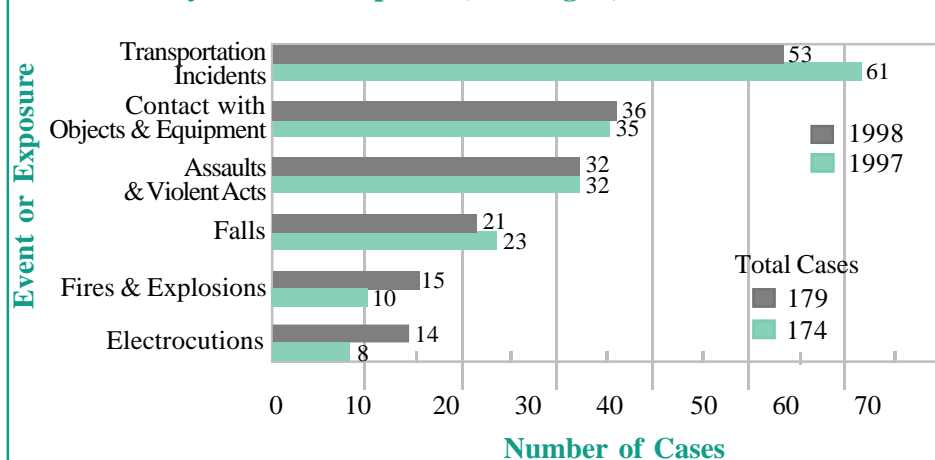
The 1998 Census of Fatal Occupational Injury statistics also showed that **Falls** occurred in 21 cases (12 percent) down from 23 cases (13 percent) in 1997, while the number of workers fatally injured due to **Fire and Explosions** increased to 15 cases (eight percent) in 1998 from 10 cases (six percent) in 1997. **Electrocutions** accounted for 14 cases (eight percent) of the fatal injuries in 1998 increasing from eight cases (five percent) in 1997.

Twenty-three percent or 41 fatalities occurred to employees in the 35-44 age group. Men recorded 158 fatal injuries and 21 fatal injuries occurred to women in 1998, the largest yearly fatality count recorded for women in Michigan for a single year.

The majority of the fatal injuries occurred in the Manufacturing industry (38) followed closely by Construction (35) and Services (30). Occupations with the largest number of fatal injuries included truck drivers, construction trades, and machine operators and assemblers.

For further information, contact the MIOSHA Information Division at 517.322.1851. ■

**Census of Fatal Occupational Injuries  
 by Event or Exposure, Michigan, 1998 & 1997**



## MIOSHA

## Strategic Plan

## Update

Earlier this year, MIOSHA developed a five-year strategic plan through a team of 15 managers with a substantial amount of stakeholder input. This plan was designed to help MIOSHA effectively focus its resources on key areas.

The three overall strategic goals include: improving workplace safety and health for Michigan's workers, increasing employer and employee awareness of, and commitment to positive changes in workplace culture and securing public confidence through excellence in MIOSHA's programs and services.

Using 19 teams from within the Bureau of Safety and Regulation, MIOSHA developed strategies and implementation plans for each of 23 performance goals. These teams have representation from all program areas affected by the performance goals. The performance goals relate directly to the three strategic goals and begin with specific baselines to be compared to in future years.

For example, one of the performance goals is a 15 percent reduction in injury and illness rates in the meat processing industry over the five year time frame. The strategies and implementation plans include an appropriate mix of enforcement, education and training, and staff training and development. Implementation has started this fiscal year and will continue through Fiscal Year 2003.

MIOSHA's Strategic Plan can be seen at the MIOSHA website.

## MIOSHA Website

[www.cis.state.mi.us/bsr](http://www.cis.state.mi.us/bsr)

## Construction Safety Delivers!

**By: Tony Allam**  
*Regional Supervisor  
Construction Safety Division*



*An Egelston Fire Dept. EMT technician readies the baby for his ride to the hospital.*

The Construction Safety Division is proud to add to the list of public services that they provide to the citizens of the State of Michigan--that of baby delivery!

BSR Construction Safety Officer for Muskegon County, Bill Gasser, while preparing for an inspection, encountered a man frantically running through a parking lot yelling for help. Bill approached the man to see if he could assist him in any way. To Bill's surprise, the man's daughter was in a car nearby having a baby! Bill attempted to calm the man down and called 911 on his personal cell phone.

As soon as Bill called 911 and was certain help was on the way, he went to the car to see if there was anything he could do to help. When he arrived, he found that the baby was already being born. Bill helped with the delivery and made sure the baby was breathing and its air passage was clear. Then in his best bedside manner, he calmed the mother down until medical help arrived.

Luckily, Construction Safety Officers take CPR and first aid training each year. We're happy to report mother and son are doing fine! ■



*Construction Safety Officer Bill Gasser at a more conventional construction site.*

## Cutting-Edge AGC Video Conference

**By: Dick Brunvand, Asst. Ex. Vice President**  
*Michigan Chapter AGC*

During July 1999, the Michigan Chapter Associated General Contractors of America (AGC) went boldly into the next millennium with its pioneering use of video conferencing. In partnership with the Michigan Occupational Safety and Health Act (MIOSHA) Program, AGC presented their annual MIOSHA Update: Construction Safety Standards classes to 11 locations throughout the state through a teleconferencing network.

Pete Anderson, Safety Director of AGC, coordinated the teleconference. Anderson said the video conference delivered their annual safety training quicker, easier and at more locations across the state. "This type of presentation helps us better serve Michigan's wide geographical area and makes training more available and convenient for contractors, saving them both time and money," said Anderson.

The teleconference was presented at three host locations and was interactively linked to eight other locations, and reached more than 175 participants. The first training was conducted on July 8 in Lansing, and was linked to sites in Livonia, Kalamazoo, and Saginaw. On July 20, host site Marquette linked with Houghton and Adrian. In the July 27 session, Traverse City hosted sites in Grand Rapids, Benton Harbor and Flint.

Rick Mee, Chief of the MIOSHA Construction Safety Division, provided an overview of the new MIOSHA construction

safety standards. "While only about four percent of the Michigan workforce is employed in the construction industry, over the last three years, job-related deaths on construction sites accounted for more than 40 percent of all MIOSHA program-related fatal workplace accidents," said Mee.

It is vitally important that contractors actively implement and enforce a comprehensive accident prevention program. To reduce construction injuries, MIOSHA has been working with contractors to eliminate hazards and worker exposures on project sites. As part of its Strategic Plan, MIOSHA has set a goal of decreasing construction site deaths by 15 percent by focusing on the four leading causes of fatal incidents: Falls, Electrocutions, Struck-bys, and Caught-between.

Mee's update covered recent changes to the following standards: Part 6, Personal Protective Equipment; Part 10, Lifting and Digging Equipment; Part 12, Scaffold and Scaffold Platforms; Part 13, Mobile Equipment, Training for Fork Lift Truck Operators; Part 25, Concrete Construction; and Part 49, Slings.

The Michigan Chapter of AGC is a full service construction trade association serving as the voice of the commercial construction industry in outstate Michigan. It is one of 101 AGC Chapters, with 33,000 member firms including 8,000 of the nation's leading general contracting companies. AGC is composed of qualified construction firms, who are dedicated to improving the quality of construction and protecting the public interest. ■



# Monitoring the Air in Your Workplace

By: Gregg Grubb, Industrial Hygienist  
Occupational Health Division

## More than just turning a pump on and off

So, you want to evaluate your employees' exposure to the chemicals they work with. What is involved in accomplishing this task? Some people think all you need to do is borrow, rent, or buy some sampling equipment, hook it up to the employees that you want to monitor, and turn the pumps on. Then you go about your business and come back at the end of the day to turn the pumps off, collect the samples and equipment, and send the samples in to a laboratory for analysis--presto, you're done, right?

**Hold on a minute, it's not so simple.**

First of all, you need to determine what chemical(s) you want to sample, in order to properly evaluate potential employee exposures. Simple you say, I'll just look at the container labels and evaluate employee exposure to all the substances listed on the label. If you think this is the way to start, consider this. While we occasionally use chemicals in their pure form in the workplace (e.g., toluene, acetone, perchloroethylene), many chemical products are a mixture of substances. Some of these ingredients may be toxic, however, some may not be. If we sample for all of the constituents identified by the label, we may be wasting valuable company resources evaluating exposures to nontoxic substances.

Additionally, there is no occupational safety or health regulation that requires a manufacturer, distributor, or importer of a chemical to list all of the ingredients on the container label. All states have occupational safety and health regulations that, at a minimum, require container labels for hazardous chemicals to list the identity of the substance as well the appropriate hazard. The material safety data sheet (MSDS) must

be reviewed to identify the appropriate substance(s) to be sampled.

The MSDS identifies the ingredients and their percentage of the total mixture of a hazardous chemical if they comprise one percent or more of the substance, unless the ingredient is carcinogenic. All carcinogenic ingredients that make up at least 0.1 percent of the mixture must be identified on the MSDS. There are occasions when a substance may comprise less than the limit necessary for inclusion on the MSDS, yet may still produce an excessive exposure. Other information noted with the ingredients include, where applicable, the federal Occupational Safety and Health Administration's (OSHA) permissible exposure limits (PELs), the American Conference of Governmental Industrial Hygienist's Threshold Limit Values (TLVs), and other pertinent exposure limit information.

Not all substances identified as ingredients on the MSDS will necessarily be toxic or have regulated or recommended exposure limits published. To further add to the confusion for the layperson, the producer of an MSDS may identify a chemical substance by use of a synonym that is not listed in the PELs or TLVs. If a proper review of the MSDS is not conducted, important information for identifying substances to include in an air monitoring program may be missed.

**Now is that all there is to do before we "turn on the pump?"**

Not yet, the task becomes even more complicated. Once you've reviewed the ingredients listed on the MSDS, you must also look at such important chemical and physical information as the vapor pressure of the substance. The vaporing employees, supervisors, and plant managers to identify how the sub-

stance is used. Typically, we want to monitor during worst case, but ordinary situations, and monitor 10 percent to 50 percent of the workers having the same exposure pattern for the substance. Examples of when to monitor include: during times of high production rather than low, during the low natural ventilation conditions of winter when windows and doors are closed, at times when peak exposures may occur during the performance of a task, and also during certain maintenance and cleaning operations.



**Monitoring for exposure to total respirable dust. The employee is grinding on a vehical part, and is wearing a non-approved respirator.**



**Monitoring for exposure to welding fumes on an employee welding on a galvanneal steel culvert. (Note: the pump is on the employee's hip.)**

We also have to determine what is the best tool to use to perform the monitoring. By tool we mean an accepted protocol published by a recognized authority--either OSHA or the National Institute for Occupational Safety and Health (NIOSH)--for collecting and analyzing the substance(s) to be sampled. Remember, for you Star Trek fans, there is no magic "tricorder," a device that can be used to sample for every possible substance known.

The tools that we use to evaluate the air in our workplaces include an array of direct-reading instruments that require no laboratory analysis to produce results, as well as numerous combinations of pumps and sampling media (from more than 75 possible choices) that require laboratory analysis prior to learning the results of the air monitoring. Once we've selected an appropriate sampling method, we must evaluate the workplace to determine if there are any substances used in the area that may chemically interfere with our monitoring, thereby producing errantly low or high results. Additionally,

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# The Bottom Line

## Workplace Safety and Health Makes Good Business Sense

This column features successful Michigan companies that have established a comprehensive safety and health program which positively impacts their bottom line. An accident-free work environment doesn't just happen. It's not achieved by good luck—but by good planning! Creating a safe and healthy workplace takes as much attention as any aspect of running a business. Some positive benefits include: less injuries and illnesses, lower workers' compensation costs, increased production, increased employee morale, lower absenteeism, and help in retaining quality employees.

### Delta Tooling, Inc.

Delta Tooling Inc. was founded in 1953 by inventor and entrepreneur Rudy Mozer in a small garage on Eight Mile in Warren. Delta was initially known for providing the highest quality models for the automotive industry.

Today Delta Technologies Group is a global premier supplier of injection molds, fixtures, and models. In addition to models, Delta now designs and builds prototype and production injection molds, compression molds, fixtures, gages, part fabrication, and specialized in-mold lamination tooling.

Delta uses a team environment from the initial concept stages all the way through to production launch—they are fully capable of meeting all program requirements for tooling, part fabrication, models, secondary process equipment, and all other fixtures.

Delta's cutting-edge technology is evident in their development of the canopy for the 21<sup>st</sup> century F-22 Raptor, a jet fighter being built by the U.S. Air Force and Boeing. Their unique design and technology prevents optical distortion and provides a variable thickness of the canopy which is required to meet strict design parameters. Delta also developed the canopy for the F-16 jet fighter for the U.S. Air Force.

Besides the facility in Auburn Hills, Delta also operates Delta Mold in Charlotte, NC,

and North American Tooling, in Monterrey, Mexico. They have three European strategic partners: Georg Kaufmann AG, Switzerland; Heidel, Germany; and Diametric, United Kingdom.

Delta Tooling's **Mission Statement** reads:

- To provide and maintain a strong working and personal relationship with our customers.

- To work as a team of highly skilled and motivated individuals, all committed to the pursuit of excellence.

- To create a safe, quality work environment for our employees.

Mr. Mozer's philosophy, from the beginning, incorporated a healthy and safe workplace. He believes that since an employee spends a substantial portion of his or her life at work, why not make the working environment as safe, clean, and pleasant as humanly possible.

While it is impossible to match the ambience of an employee's home, after all, it's still

a workplace—below are some standards Delta adopted in their first building in Warren and adhered to in their expansion in Troy and eventually Auburn Hills.

- Each facility is friendly and airy.

- The total building is air conditioned, not just the office area.

- Dust collecting systems are installed where needed.

- Walls, ceiling and floors are painted in a light color.

- There is a non-



*Mike Everett, SET Supervisor; David Nelson, SET Consultant; Pete Mozer, President & Rudy Mozer, Chairman, Delta Tooling; and Maryann Markham, SET Division Chief.*

smoking policy in all buildings, with a sit-down smoking area outside.

Additional safety measures include: regular safety meetings, orientation/safety training for new employees, and joint housekeeping responsibilities between employees and janitors. Delta also provides company-funded profit sharing, pension and 401K plans, and a health care plan. Their team approach encourages employee involvement while demanding their commitment to quality.

Delta was recommended for this column by SET Division Occupational Safety Consultant David Nelson. He is impressed by Rudy's vision, his engineering genius, and especially by his determination to provide a safe and healthy workplace for all employees. "Actively caring for the safety and health of employees results in employees that actively care for the health of the company, and will benefit the company's future well-being," said Nelson.

"Delta's philosophy is an intangible asset that encourages our employees to perform with a cheerful, productive attitude. It has helped bring the quality of our products to a very high standard," said Mozer. "Over the years, Delta's employees have made a major contribution to the success and growth of the company."



*The Mold Shop at Delta Tooling, Inc.*



# When Can You Revise A Baseline Audiogram?

By: *Harvey Johnson, CIH*  
*Occupational Health Division*

Noise is common in many Michigan workplaces. Unfortunately, permanent hearing loss is also a common result of exposure to extreme noise. Since significant hearing loss usually occurs over many years, it may not be noticed until the loss is great and permanent. Once a hearing loss has occurred, it is likely to affect an individual's ability to communicate at home and in the workplace.

Reporting is incomplete for 1998, but already more than 1600 new cases of employees with known or suspected hearing loss caused by noise at work were reported to the Department of Consumer and Industry Services. Occupational noise-induced hearing loss is considered a work-related illness and Michigan law requires physicians, hospitals, clinics, or employers to report all known or suspected cases of occupational disease.

This reporting system is used to identify companies which may not be in compliance with the MIOSHA Occupational Noise Exposure rules. In 1998, 42 percent of the companies identified for inspection by the surveillance system had no hearing conservation program or a deficient program despite the presence of noise levels above the action level.

The Occupational Noise Exposure rules for General Industry require employees exposed to noise levels at or greater than the action level of 85 dBA, 8-hour, time-weighted average (TWA), to be included in a hearing conservation program. One of the key elements of a hearing conservation program is an audiometric test, commonly called a hearing test. During a hearing test an audiogram is made which shows the hearing thresholds at various frequencies. The lower the thresholds, the better the employee's hearing. If employee audiograms show that hearing is not being damaged from year to year, then the hearing conservation program is effective.

Baseline (initial) audiograms must be provided within six months of the exposure for all employees exposed at or above the action level. Subsequent testing must be performed at least once per year. A standard

threshold shift (STS) is a change in the hearing threshold relative to the baseline audiogram of an average of 10 decibels (dB) or more at 2, 3, and 4 kilohertz (kHz) in either ear. These frequencies have been selected since speech mainly occurs in these frequencies. Also, in the early stages of noise induced hearing loss, the first evidence of loss is usually evident in the frequency range of 4 to 6 kHz. Annual audiograms are meant to detect hearing loss before it is severe.

The MIOSHA Noise Standard states that "an annual audiogram may be substituted for the baseline audiogram when, in the judgement of the audiologist, otolaryngologist, or physician who is evaluating the audiogram, the STS is persistent or the hearing threshold shown in the annual audiogram indicates significant improvement compared to the baseline audiogram." What is meant by persistent and significant improvement? The National Hearing Conservation Association (NHCA) has written guidelines meant to be used by a professional reviewer (audiologist or physician) to answer these questions.

According to the NHCA, significant improvement in hearing has occurred if the average of thresholds for 2, 3, and 4 kHz for either ear shows an improvement of 5 dB or more from the baseline value. The baseline for that ear should be revised to the test which shows the lower (more sensitive) value for the average unless the audiologist or physician determines and documents specific reasons for not revising.

An STS is persistent if the average change for either ear is 10 dB or more from the baseline value and persists on the next annual test (or the next test given at least six months later). Unless the audiologist or physician determines and documents specific reasons for not revising, the baseline for that ear should be revised to the test which shows the lower (more sensitive) value for the average.

For more information on baseline audiograms or other occupational health issues, please call the Occupational Health Division of MIOSHA at 517.322.1608, or visit our web site ([www.cis.state.mi.us](http://www.cis.state.mi.us)). You can also visit the NHCA website ([www.hearingconservation.com](http://www.hearingconservation.com)). ■



**Martha B. Yoder, Chief**  
**General Industry Safety Division**  
**New Chief**

Martha B. Yoder was appointed Chief of the General Industry Safety Division of the Bureau of Safety and Regulation (BSR), effective Aug. 9, 1999. Martha joined the bureau in 1986.

In this position, Martha is responsible for overseeing Michigan's safety enforcement efforts in general industry. To meet the mission to ensure that covered employees are provided a safe workplace free of known and recognized hazards through enforcing occupational safety standards, Martha will manage a staff of approximately 67 workers, including 30 safety officers and senior inspectors located throughout the state. She will also be responsible for integrating and implementing those portions of the MIOSHA Strategic Plan related to general industry safety enforcement.

Her previous experience in BSR includes the positions of Supervisor and Program Developer in the Safety Education and Training Division, and Executive Assistant to the Bureau Director.

During the past 13 years, Martha has worked on numerous projects and assignments including: the recent CET Summit project to review consultation, education and training services; the MIOSHA Strategic Plan; liaison with federal OSHA for program monitoring; "Good Faith Credit" penalty reduction implementation; development of the Informal Settlement Agreement pilot project; the MIOSHA Penalty Initiative Task Group; the Voluntary Protection Program Implementation Task Group; and the MIOSHA Ergonomics Committee.

Martha has extensive experience developing and conducting programs to encourage voluntary development and implementation of successful safety programs. A case study approach for occupational safety and health program training, which she developed jointly with SET Consultant Suellen Cook, will be presented at the NIOSH National Conference on Workplace Safety and Health Training in St. Louis, Missouri, this October.

A graduate of Western Michigan University, Martha holds Bachelor of Science and Master of Public Administration degrees.

# Wage & Hour

## Youth Employment

# News

## Prevailing Wage

### "Hello, My Name Is ..."

by: Yvonne Clark

Supervisor, Wage & Hour Division

You're just about to settle down for the evening, when the doorbell rings, or you're on your way into the drugstore at a nearby mall, when you hear those words, "Hello, my name is . . . and I'm selling candy for . . ."

The face you look into could be someone as young as 10 years old and their response, when you ask what the organization does, may appear to be as legitimate as, "They help keep kids busy, out of trouble and away from drugs, and they have trips and give special awards."

However, the public, parents and minors need to be aware that many of these companies, which frequently use names that imply they are charitable volunteer corporations, are most often **not** recognized youth-oriented organizations. The overriding purpose of the business is profit, rather than citizenship training and character building. The minors are not members of the organization, but employees hired to sell products for a small commission. They are often illegally employed; underage; improperly supervised, or absent any adult supervision; working without work permits; and for very long, late hours.

Act 90, P.A. of 1978, The **Youth Employment Standards Act** regulates the employment of minors (individuals under the age of 18). The Act requires minors to have a work permit, on file at the place of business, prior to being employed. It also limits the number of hours and the times that minors can work, only allowing employees under the age of 16 to work between 7 a.m. and 9 p.m., and those 16 and 17 years of age to work between 6:00 a.m. and 10:30 p.m. (or 11:30 p.m. during school vacation periods). The maximum number of hours a minor can work is 48 per week, school and work time combined, and no longer than an average of 8 hours per day, six days a week. The minimum age for minors, working for this type of business, is 14 and supervision by a responsible adult (18 or older) is required at all times. The law also mandates that a minor must not work for more than 5 hours without a 30 minute uninterrupted meal and rest break.

Investigations of door-to-door candy sales companies have consistently determined violations of some, if not all, of the above requirements. Candy-sales activity usually increases in the spring, but many businesses operate all year and in locations all over the state. Minors have experienced frostbite selling candy in freezing temperatures during the winter. They have also been picked up by local and state authorities, alone, many miles away from their homes.

It is to be noted that there are many legitimate youth-oriented organizations that also sell cookies, candies, etc., such as Girl Scouts, church groups and schools. They are easily recognizable and should not be confused with the companies described above. Some inquiry as to the purpose of the company and the designation of the money collected should assist in deciding which type of organization is involved.

To make further inquiry or to report a company that you believe to be illegally employing minors, contact the Wage & Hour Division.

The Wage & Hour Division is currently in the process of surveying building trade union locals to establish the new commercial prevailing rates for state funded construction projects pursuant to the authority set forth in the Michigan Prevailing Wage Law, Act 166 of 1965.

Trade locals were requested to complete a survey form and provide copies of collective bargaining agreements to the division this month. Based upon information received, the Division will establish prevailing rates for approximately 80 construction mechanic classifications for each of Michigan's 83 counties.

Examples of some of the types of state construction projects include new construction, and reconstruction or repair to the following: public school buildings, state roads and state facilities, colleges, universities, correctional institutions, highways, warehouses or state owned buildings.

Questions about prevailing wages and the survey process may be directed to **Georgia Harris** of the Wage & Hour Division. The new rates will be available January 3, 2000, and remain in effect until December 31, 2000.

### For More Information:

Wage & Hour Division  
517.322.1825

Website:  
[www.cis.state.mi.us/bsr/divisions/wh/home.htm](http://www.cis.state.mi.us/bsr/divisions/wh/home.htm)

# Ground Fault Circuit Interrupter Protection

by: *Jerry Medler*  
*SET Occupational Safety Consultant*

Proper Ground Fault Circuit Interrupter (GFCI) policies and procedures protect employees from electrocution, when using plug-in cord-connected portable electrical equipment in industrial situations, especially in wet or damp locations. GFCIs prevent electrocution by instantly disconnecting the electrical current if a worker becomes a path to ground.

With the adoption of Part 39 Design Standards for Electrical Systems in June of 1994, it was hoped that widespread use of GFCIs would be established. Although such protection was included in the standard, it was extremely limited in application, being only required around swimming pools and fountains.

MIOSHA's Construction Safety Division has requirements for the use of GFCI protection in and around construction sites. MIOSHA's General Industry Safety Division can enforce these construction standards whenever the work being performed is construction-related. In other words, if an industrial maintenance employee is performing construction activities in a damp location with an extension cord and a drill, a General Industry Safety Officer would document the situation and refer it to Construction Safety.

It's important for companies to remember that MIOSHA Safety Standards are a place to start, not to stop, in the creation of a safe and healthy work environment. One company I have had the good fortune to work with over the years, Morton International, has made it a point to go above and beyond MIOSHA standard requirements, in an attempt to insure a safe and healthy workplace, as opposed to simply complying with standards.

Morton International, a Rohm & Haas Company, located in Manistee, produces salt for animal consumption, water softening and salts for human consumption for bakeries, canneries and all

food processors. The Manistee plant currently employs a combined total of 163 salaried and hourly employees.

In February 1997, Morton International upgraded their requirements for employee use of GFCIs. Following is a summary of their policy and operating procedures for GFCI protection in their facilities.

Morton first established supervisor, employee, and contractor responsibilities for the proper use of portable GFCIs. Supervisors are responsible for ensuring implementation of the procedure and must guarantee that all affected employees have been properly trained in the use of GFCIs.

All employees are required to use a portable GFCI when plugging any portable electrical hand tool (except portable lights) into a 110 volt receptacle, following company procedures. Employees that are issued a GFCI are accountable for that device and must return defective devices for replacement.

Contractors are also required to use GFCIs while performing work at the Morton facility, and are responsible for providing such devices to their employees.

In general, a portable GFCI must be used whenever a portable electrical hand tool (except portable lights) is plugged into a 110 volt receptacle. Extension cords, with or without a light, are considered to be a portable electrical hand tool. The portable GFCI is plugged into the 110 volt receptacle first. The portable electrical equipment and/or extension cord is then plugged in the portable GFCI.

Employees must be trained in the use of GFCIs before they are issued their own

device. This training must be documented and forms are provided to supervisors. The critical part of the training is learning the proper testing procedure. Portable GFCIs must be tested prior to each use. If the device fails the test, it must not be used and should be replaced immediately. If the device passes the test, the employee can connect the desired portable equipment into the output cord receptacle of the portable GFCI and operate normally.

If the portable GFCI tests properly without any device plugged into it but trips each time a portable electrical hand tool is plugged in, then the portable electrical equipment has a ground fault and needs to be repaired or replaced. Employees must not use the portable electrical hand tool if this condition occurs—a real shock hazard may exist.

The following precautions are also followed at : do not connect any electrical cord longer than 250 feet to the GFCI output, in order to avoid the possibility of nuisance trips; do not immerse the portable GFCI in water; and do not use the portable GFCI in a wet environment if any of the seals are damaged.

If you have any questions regarding the safe use of GFCIs and portable electrical equipment, please call the SET Division at 517.322.1809. ■



*A Morton Salt employee demonstrates the proper use of a portable GFCI.*



## Construction Safety Standards Commission

### Labor

Mr. Daniel Corbat  
Mr. Carl Davis\*\*  
Mr. Andrew Lang  
Mr. Martin Ross

### Management

Mr. Thomas Hansen  
Mr. Charles Gatecliff  
Ms. Cheryl Hughes  
Mr. Peter Strazdas\*

### Public Member

Mr. Kris Mattila

## General Industry Safety Standards Commission

### Labor

Mr. James Baker  
Mr. Tycho Fredericks  
Mr. Michael D. Koehs\*

### Management

Mr. George A. Reamer  
Mr. Timothy J. Koury\*\*  
Ms. Doris Morgan  
Mr. Andy C. Brown

### Public Member

Ms. Geri Johnson

## Occupational Health Standards Commission

### Labor

Dr. G. Robert DeYoung  
Mr. Mark Gaffney  
Ms. Cynthia Holland  
Capt. Michael McCabe\*

### Management

Mr. Robert DeBruyn  
Mr. Michael Lucas  
Mr. Richard Olson  
Mr. Douglas Williams\*\*

### Public Member

Dr. Glen Chambers

\*Chair

\*\*Vice Chair

# Standards Update

## Partnership in Problem-Solving

by: *Marsha Parrott-Boyle*

*Industrial Hygienist Standards Specialist*

The goal of the MIOSHA Program is to protect the health and safety of Michigan workers. The MIOSHA Program is mandated to ensure that the state's safety and health standards meet the "effective as" test imposed by federal OSHA. Providing the best standards and making necessary revisions in a timely fashion is necessary to help MIOSHA protect workers. Standards need to be written in clear meaningful language and available to employers and employees as soon as possible, in order to provide protective measures which can prevent occupational accidents, injuries and illnesses.

On May 11, 1999, MIOSHA convened a Rules Promulgation Workshop to examine the current rule-making process and to search for ways to improve the process and to make it more efficient. Working together were: Commissioners from the three MIOSHA Standards Commissions (see side panel); staff from several divisions of MIOSHA; representatives from the Legislative Service Bureau and the Office of Regulatory Reform; the CIS Regulatory Affairs Officer; and stakeholders who attended the MIOSHA Future Search Conference.

Commissioner Peter Strazdas reported that "This workshop brought together all parties involved in the rule-making process to explore the unique challenges of standards promulgation." Strazdas is Chair of the Construction Safety Standards Commission, and is from Western Michigan University in Kalamazoo. As each representative described their portion of the process, the group was able to come together and explore ways of making the process work more efficiently. "This was a rare opportunity, when everyone began to understand each other's challenges," said Strazdas.

This workshop was organized to help address an initiative resulting from MIOSHA's 5-Year Strategic Plan which, among other goals, directed the Standards Division "To promulgate federal standards adopted by reference within six months." This workshop also provided an orientation to new Commissioners and an opportunity for concerned individuals to have input.

The promulgation and revision of rules takes the efforts of numerous agencies. The workshop proved very successful in finding potential solutions for improving the process. "The power of the day was finding real solutions through partnership," said Commissioner Strazdas.

*To contact Connie Munsch, Chief of the Standards Division, or any of the Commissioners, please call the Standards Division Office at 517.322.1845.*

# Status of Pending Michigan Occupational Safety & Health Standards

## Occupational Safety Standards

### General Industry

Part 21.	Powered Industrial Trucks .....	At Advisory Committee
Part 56.	Storage and Handling of Liquefied Petroleum Gases .....	Draft at LSB for informal review
Part 58.	Vehicle Mounted Elevated & Rotating Platforms .....	Approved by Commission for review
Part 62.	Plastics .....	Public Hearings August 17 & 19
Part 73.	Fire Brigades .....	Draft at LSB for formal review
Part 74.	Fire Fighting/Amendment #1 .....	Draft at LSB for informal review
Part 74.	Fire Fighting/Amendment #2 .....	At Advisory Committee
Part 78.	Storage & Handling of Anhydrous Ammonia .....	Draft at LSB for informal review
Part 79.	Diving Operations .....	At Advisory Committee
Part 90.	Permit-Required Confined Spaces (PRCS) .....	To be final 10/22/99
Part 91.	Process Safety Management of Highly Hazardous Chemicals (PSM) .....	Final, effective 8/19/99

### Construction

Part 10.	Lifting & Digging .....	Draft at LSB for informal review
Part 18.	Fire Protection & Prevention .....	Approved by Commission for review
Part 22.	Signs, Signals, Tags & Barricades .....	At Advisory Committee
Part 26.	Steel and Precast Erection .....	At Advisory Committee
Part 30.	Telecommunications .....	Approved by Commission for review
Part 31.	Diving Operations .....	At Advisory Committee
Part 32.	Aerial Work Platforms .....	Draft at LSB for informal review
Part 91.	Process Safety Management of Highly Hazardous Chemicals .....	Final, effective 8/19/99

## Occupational Health Standards

### General Industry

Acrylonitrile .....	Draft at LSB for informal review
Asbestos for General Industry .....	Draft under review
1,3-Butadiene .....	Final, effective 10/16/99
Coke Oven Emissions .....	Final, effective 10/16/99
Ethylene Oxide .....	Draft at LSB for informal review
Formaldehyde .....	Final, effective 10/16/99
Hazardous Waste Operations and Emergency Response (HAZWOPER) .....	Draft at LSB for informal review
Inorganic Arsenic .....	Draft at LSB for informal review
Lead .....	Draft under review
Methylene Chloride .....	Final, effective 8/31/99
Methylenedianiline .....	Final, effective 10/16/99
Permit-Required Confined Spaces (PRCS) .....	To be final 10/22/99
Process Safety Management of Highly Hazardous Chemicals (PSM) .....	Final, effective 8/19/99
Vinyl Chloride .....	Draft at LSB for informal review

### Construction

Asbestos .....	Final, effective 10/16/99
Lead .....	Final, effective 11/2/99

*The MIOSHA Standards Division assists in the promulgation of Michigan occupational safety and health standards. To receive a copy of the MIOSHA Standards Index (updated April 1999) or for single copies and sets of safety and health standards, please contact the Standards Division at 517.322.1845.*

RFR Request for Rulemaking  
 ORR Office of Regulatory Reform  
 LSB Legislative Services Bureau  
 JCAR Joint Committee on Administrative Rules

# Education & Training Calendar

Date	Course Location	Contact MIOSHA Trainer	Phone
<b>November</b>			
3	Fundamentals of Safety Clinton Township	Teri Gribbon Brian Dixon	810. 498.4002
3	Recordkeeping Port Huron	Rob Mariles Bernard Sznader	810.985.1865
4	When MIOSHA Visits Canton	Jacqueline Schank Suellen Cook	734.464.9964
5	When MIOSHA Visits Temperance	Judith Hamburg Suellen Cook	734.847.0559
9	Supervisor's Role In Safety Shelby Township	Reid Sheeley Lee J. Kueppers	810.752.2091
15	When MIOSHA Visits Southfield	Pat Murphy Linda Long	248.353.4500
15, 16, 17	Safety Administrator Course Jackson	Tom Nicholls Quenten Yoder	517.782.8268
16	Investigations/Recordkeeping/Work Westland	Nicole Knight Linda Long	734.524.7668
17	Machine Guarding Kalamazoo	Char Gibson Micshall Patrick	616.372.5312
17	Supervisor's Role In Safety Clarkston	Christy Winter Richard Zdeb	248.620.2534
19	MIOSHA Required Written Programs Clinton Township	Sharon Macri Suellen Cook	810.263.2882
30 & 12/1 & 2	Safety Administrator Course Saginaw	Bill Lechel Dave Luptowski	517.755.5751
<b>December</b>			
1	Powered Industrial Truck Train-the-Trainer Kalamazoo	Noreen Reardon Micshall Patrick	616.372.5312
2	Supervisor's Role In Safety Garden City	Karen Dalton Linda Long	734.458.3423
9	Mechanical Power Press Grand Rapids	Darcy Dustin Jerry Swift	616.698.1167
10	MIOSHA Inspections & You Kalamazoo	Terri Marsh (Wisconsin) Gregg Grubb	715.833.3959
14, 15	Safety Solutions II Monroe	Ed Ratzenberger Linda Long	810.557.7010



# Variances

Published November 1, 1999

**Following are requests for variances and variances granted from occupational safety standards in accordance with rules of the Department of Consumer & Industry Services, Part 12, Variances (R408.22201 to 408.22251).**

## Variances Requested Construction

### *Part number and rule number from which variance is requested*

Part 8 - Material Handling: Rule R408.40833, Rule 833(1)

### *Summary of employer's request for variance*

To allow employer to tandem lift structural steel members under controlled conditions and with stipulations.

### *Name and address of employer*

Abray Steel Erectors, Inc.

### *Location for which variance is requested*

Novi Elementary School, Novi

### *Name and address of employer*

American Erectors, Inc.

### *Location for which variance is requested*

Heller Machine Tool, Troy  
Detroit Metropolitan Airport, Romulus

### *Name and address of employer*

Bristol Steel & Conveyor Corp.

### *Location for which variance is requested*

G-3000 VanSlyke, Flint

### *Name and address of employer*

Broad, Vogt & Conant, Inc.

### *Location for which variance is requested*

General Motors - Oldsmobile, Lansing

### *Name and address of employer*

Cadillac Iron, Inc.

### *Location for which variance is requested*

MCI-Worldcom Detroit, Detroit

### *Name and address of employer*

Douglas Steel Erection Company

### *Location for which variance is requested*

Saginaw Valley State University, Saginaw  
505 West Allegan, Lansing

Ronald McDonald House of Mid-Michigan, Lansing

William Beaumont Hospital, Research building, Royal Oak

### *Name and address of employer*

Havens National Riggers & Erectors

### *Location for which variance is requested*

Northwest Midfield Terminal Project, Romulus

### *Name and address of employer*

Johnson Steel Fabrication, Inc.

### *Location for which variance is requested*

SMCO Lost Foam Project, Saginaw

GM Building 16 expansion & renovation, Milford

### *Name and address of employer*

McGuire Steel Erection, Inc

### *Location for which variance is requested*

T & W Tool & Die, Oak Park

Univ. of Michigan-College of Arts, Sciences & Letters, Dearborn

DCT Engineering Bldg., Warren

St. Joe Ambulatory Health Ctr., Brighton

The Home Depot #2731, Madison Heights

Ann Arbor Distribution, Ypsilanti

Waterford Cinema Addition, Waterford

Chrysler Mopar, Warren

GM-TPC, Pontiac

Rite Aid, Ann Arbor

Public Storage, Southfield

H. R. Krueger Machine Tool, Farmington

Light Industrial Building, VanBuren Twp.

Paint Creek Elementary School, Lake Orion

Ford Technical Center, Westland

Traverwood 2B Office, Ann Arbor

Ionia Level IV Prison, Ionia

Traverwood 2A Lab, Ann Arbor

ADP, Dearborn

Flagstar Bank, Troy

Harbor Office Building, Bloomfield Hills

Rontal Office Center, Farmington Hills

### *Name and address of employer*

Pioneer Inc.

### *Location for which variance is requested*

East Paris Medical, Grand Rapids

Kent County Courthouse, Grand Rapids

### *Name and address of employer*

Sova Steel, Inc.

### *Location for which variance is requested*

Dearborn Civic Center, Dearborn

Wayne State University, Fitness Center, Detroit

Wayne State University, Law School, Detroit

### *Name and address of employer*

The State Group International

### *Location for which variance is requested*

New continuous galvanize line at National Steel, Ecorse

### *Name and address of employer*

Whitmore Steel

### *Location for which variance is requested*

G M Proving Grounds, Milford

### *Part number and rule number from which variance is requested*

Part 26 - Steel and Precast Erection: Rule R408.42623

### *Summary of employer's request for variance*

To allow employer under controlled conditions, and the following stipulations, while connecting structural steel members

using ground based aerial work platforms to omit temporary floors being installed and maintained within 2 stories or 30 feet, whichever is less, below and directly under that portion of each tier of beams being erected or on which bolting, riveting, welding, or touch-up painting is being done.

### *Name and address of employer*

Sova Steel, Inc.

### *Location for which variance is requested*

Detroit Tiger Stadium, Detroit

### *Part number and rule number from which variance is requested*

Part 32 - Aerial Lift Platforms: R408.43209, Rule 3209(9)

### *Summary of employer's request for variance*

To allow employer to firmly secure a scaffold plank to the top of the intermediate rail of the guardrail system of an aerial lift for limited use as a work platform provided stipulations are adhered to.

### *Name and address of employer*

MBM Fabricators & Erectors

### *Location for which variance is requested*

Chrysler Corporation - Maintenance Facility Addition, Marysville

## Variances Granted Construction

### *Part number and rule number from which variance is requested*

Part 8 - Material Handling: Rule R408.40833, Rule 833(1)

### *Summary of employer's request for variance*

To allow employer to tandem lift structural steel members under controlled conditions and with stipulations.

### *Name and address of employer*

Assemblers, Inc.

### *Location for which variance is requested*

Troy Corporate Center, Troy

### *Name and address of employer*

Broad, Vogt & Conant, Inc.

### *Location for which variance is requested*

General Motors - Mich. Assembly Plant, Flint

### *Name and address of employer*

Douglas Steel Erection Company

### *Location for which variance is requested*

Michigan State University, Bio-Physical Sciences Bldg., East Lansing

### *Name and address of employer*

Havens National Riggers & Erectors

### *Location for which variance is requested*

Great Lakes Steel/Cold Galvanizing Line

*Cont. on Page 16*

# Variances

Published November 1, 1999

## Cont. from Page 15

Project #1/Hazema Corp., Ecorse

### *Name and address of employer*

McGuire Steel Erection, Inc.

### *Location for which variance is requested*

Lansing State Journal-USA Today, Lansing  
St. Mary's Hospital, Saginaw  
Franklin Pointe Office Bldg., Bloomfield Hills

### *Name and address of employer*

Midwest Steel, Inc.

### *Location for which variance is requested*

Daimler Chrysler IS expansion project,  
Auburn Hills

### *Name and address of employer*

Sova Steel, Inc.

### *Location for which variance is requested*

Macomb Community College, Warren

### *Name and address of employer*

Vulcan Iron Works

### *Location for which variance is requested*

Ford Motor Company, Dearborn

### *Name and address of employer*

Whitmore Steel

### *Location for which variance is requested*

Tiger Stadium, Detroit

### *Part number and rule number from which variance is requested*

Part 10 - Lifting & Digging Equipment: Rule R408.41015a(2)(g)(h)(i) & R409.41018a(12)

### *Summary of employer's request for variance*

To amend the previous variance request to allow the use of a work platform containing a stripping platform mounted on the boom of a P & H Omega 40 ton hydraulic crane to heights of up to 70 feet provided all of the requirements of Construction Safety Standard, Part 10. Lifting and Digging Equipment except rule 1015a(2)(g)(h)(i) and 1018a(12) are met.

### *Name and address of employer*

Walter Toebe Construction Company

### *Location for which variance is requested*

I-275Reconstruction Job in Wayne/Oakland County, MDOT Project #IM82125-45752A

### *Part number and rule number from which variance is requested*

Part 10-Lifting & Digging Equipment: Rule R408.41015a(2)(g)(h)(i) & R408.41018a(12) & (16)

### *Summary of employer's request for variance*

To allow the use of a work platform containing a stripping scaffold mounted on the boom of a P & H Omega 40 ton hydraulic crane provided all of the requirements of Construction Safety Standard, Part 10. Lifting & Digging Equipment except Rule

1015a (2)(g)(h)(i) and 1018a (12) & (16).

### *Name and address of employer*

S. E. Johnson Companies

### *Location for which variance is requested*

Blue Water Bridge, Port Huron

### *Part number and rule number from which variance is requested*

Part 10 - Lifting & Digging Equipment: Rule R408.41015a(3) and (4), & R409.41018a(21)

### *Summary of employer's request for variance*

To allow the use of a work platform suspended from the loadline of a crane to transport employees to elevated scaffold platforms to perform welding during stack construction.

### *Name and address of employer*

Monarch Welding & Engineering, Inc.

### *Location for which variance is requested*

Central Wayne County Energy Recovery Project, Dearborn

### *Part number and rule number from which variance is requested*

Part 10 - Lifting & Digging Equipment: Rule R408.41018a(16) & rule R409.41020a(5)

### *Summary of employer's request for variance*

To allow the employer to utilize rotation resistant cable to raise and lower work platform and to allow the derrick hoist machine base to be anchored at the two rear corners to deadmen in lieu of all four corners, provided stipulations are adhered to.

### *Name and address of employer*

CB&I Constructors, Inc.

### *Location for which variance is requested*

1,500,000 gallon waterspheroid, Wixom

### *Part number and rule number from which variance is requested*

Part 12 - Scaffolds and Scaffold Platforms: R408.41221, Rule 1221(1)(c)

### *Summary of employer's request for variance*

To allow employer to use stilts at a maximum height of 24 inches under controlled conditions and according to certain stipulations.

### *Name and address of employer*

Ritsema Associates

### *Location for which variance is requested*

Bronson Hospital Project, Kalamazoo

### *Name and address of employer*

Stanton Interiors, Inc.

### *Location for which variance is requested*

Bronson Methodist Hospital, South Campus Development, Kalamazoo

### *Part number and rule number from which*

### *variance is requested*

Part 20 - Demolition: Rule R408.42034, Rule 2034(2)

### *Summary of employer's request for variance*

To allow employer to drop demolition debris in a secured, closed area of the building without a material chute under controlled conditions and according to certain stipulations.

### *Name and address of employer*

SCS Group

### *Location for which variance is requested*

Board of Water & Light Power Plant, Lansing

## Variances Granted General Industry

### *Part number and rule number from which variance is granted*

Part 1 - General Provisions - Rule 36(1)

### *Summary of employer's request for variance*

Employer has been granted permission to use air blow guns more than 30 PSI dead ended under controlled conditions.

### *Name and address of employer*

Kellogg Crankshaft

### *Location for which variance is granted*

3524 Wayland Drive, Jackson

### *Part number and rule number from which variance is granted*

Part 17 - Refuse Packer Unit - Rule 1732(1)

### *Summary of employer's request for variance*

Employer has been granted permission to use a barrier, interlocked gate and stop bar combination in lieu of the required standard barrier.

### *Name and address of employer*

Edwards Brothers, Inc.

### *Location for which variance is granted*

2500 S. State Street, Ann Arbor

### *Part number and rule number from which variance is granted*

Part 17 - Refuse Packer Unit - Rule 1732(1)

### *Summary of employer's request for variance*

The company has been granted permission to use a system of partial barriers, guard bars, leverage bars, standardized trash carts, interlocked gate, signage and employee training in lieu of the required fixed barrier on their trash compactor.

### *Name and address of employer*

Behr Industries Corp.

### *Location for which variance is granted*

1020 7 Mile Road PO Box 394, Comstock Park

## Ford Settlement

*Cont. from Page 1*

sult of inadequate controls for the safe shut-down of the boiler. While BCC inspectors look for the cause of an accident, MIOSHA investigations focus on identifying violations of state worker safety and health standards.

### Ford Complex Background

On February 1, 1999, at approximately 1:00 p.m., there was an explosion in the power plant jointly owned by Ford Motor Company and Rouge Steel. The 80-year-old Ford Rouge produces steel for the automotive industry.

About 140 workers were employed at the power plant, which was scheduled to be replaced with a new facility in 2000. The Rouge power plant produced steam by burning a mixture of natural gas, pulverized coal, and blast furnace gas. The new facility, already under construction at the time of the accident, will use natural gas to generate electricity.

### BCC Investigation

Boiler accidents are rare in Michigan, but when they do happen the results are often devastating. There are more than 70,000 commercial boilers in Michigan, with 4,000 high-pressure power boilers like those at Ford. Power boilers are inspected annually by licensed inspectors.

The Rouge power house contained seven power boilers used to provide steam at the complex. All boilers were housed in the same building. At the time of the explosion, Boilers No. 2, 3, 4, 5, and 7 were operating. At 8:00 a.m., Boiler No. 6 was being shut down for annual maintenance. At 12:00 noon, workers were completing the shut-down process by blanking the natural gas supply. At about 12:58 p.m., the natural gas control valves were opened to facilitate purging any remaining natural gas from the supply lines through the boiler. The explosion occurred a few minutes after the valve was opened.

The BCC investigation determined that the accident was a natural gas fuel explosion and not a boiler steam explosion. BCC inspectors concluded the cause of the accident was a result of inadequate procedural controls for the safe shut-down of the boiler. Improper valve line-ups and inadequate work group communication allowed natural gas to flow into the boiler furnace chamber. This is believed to be the source of the gas build-up which caused the explosion.

The boiler inspection was conducted by BCC Boiler Division Chief Bob Aben and Boiler Inspector Dave Johnson. A large part of the BCC involvement consisted of working with Ford to restore power to the complex. Companies across the U.S. provided 38 temporary boilers. BCC worked closely with Ford to assure the safe installation and operation of the temporary boilers. Manufacturing resumed in the Ford companies at the complex within a week after the explosion. At Rouge Steel most of the production activities were down for more than three months.

### MIOSHA Investigation

By 3:00 p.m., MIOSHA Safety Officer Joe Barela was on-site at the accident. He found activities at the scene focused on rescue operations and immediately called for backup assistance. Because the first priority was to rescue the injured and evacuate the building, the MIOSHA investigation started the following day. Due to the size of the catastrophe and the number of employees involved, the CIS investigative team consisted of five MIOSHA investigators and two BCC inspectors.

Entry into the seven-story power house was, and is, hampered by debris, making some areas unstable and impossible to enter until cleaned and stabilized. Also, a large amount of asbestos was blown off the piping, which posed additional hazards for entry, and required full protective suits and respirators to be worn. Electrical power was not available, so the investigations could only be conducted during daylight hours.

The investigation was among the most complex ever conducted by MIOSHA. The investigation lasted seven months, and was hampered by several factors including: problems with access to the site; the need to conduct extensive interviews, including waiting until hospitalized workers were released; the availability of key documents and the physical review of voluminous material; the instability of the structure; and the large number of entities conducting investigations, including CIS, the Dearborn Fire Marshal Office, Ford Motor Company, the UAW, and at least three insurance companies.

The MIOSHA investigative team consisted of: Chuck Lorish, Regional

Supervisor, Chuck Slavik, Senior Safety Officer, and Safety Officers Joe Barela, Jeff Kelley, and Rick Odorico. These safety officers reviewed more than: 689 blueprints; 324 binders of documents containing more than 200,000 pages; 29,000 photos; and 375 boxes of evidence, including material in 10 file cabinets and 20 blue-print file cabinets.

In a typical MIOSHA investigation, a single safety officer conducts the inspection and issues the report. In this investigation, the safety officers worked as a team to evaluate the safety and health practices at the Rouge plant. The team relied heavily on employee interviews. Insurance audits which evaluated Ford's safety and health practices in the power plant, along with other documents and physical evidence which were also critical in the investigation.

The CIS team conducted more than 300 interviews with about 150 Ford employees and supervisors. Repeat interviews were necessary to clarify information. Chuck Lorish and Rick Odorico conducted management interviews, Chuck Slavik and Jeff Kelley conducted employee interviews, and Joe Barela continued the on-site investigation. At times, industrial hygienists from the MIOSHA Occupational Health Division were also involved. BCC Boiler Inspector Dave Johnson also worked closely with the team, and his expertise proved invaluable.

General Industry Safety Division Assistant Chiefs Eva Hatt and Jim Gordon, as well as Deputy BSR Director Doug Kalinowski contributed leadership, direction and expertise in the management and coordination of the investigation. Diane Phelps, Chief of the BSR Appeals Division and Rick Gartner from the office of the Attorney General, were also of great help during the investigation and in the development of the Settlement Agreement. Professionals from Ford and the UAW were also cooperative in attempting to facilitate a thorough and comprehensive investigation.

The team met almost daily to evaluate findings and utilized several new technologies including: cell phones, to check information quickly; the Internet, which provided a wealth of information; laptop computers to record interviews, evidence and generate weekly reports; and video cameras, which are not normally used in accident investigations.

MIOSHA also received assistance from the federal Occupational Safety and Health Administration (OSHA) Salt Lake City Technical Center. The technical expertise of the OSHA staff provided essential details as the investigation proceeded. An explosion expert and a power plant engineer with 40 years experience also provided important technical expertise.

The team concept worked extremely well and the MIOSHA investigation provided a solid basis on which to forge the Settlement Agreement. MIOSHA safety officers found that significant

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**MIOSHA General Industry Safety Officers enter the Ford Rouge power plant after the explosion.**



## Ford Settlement

*Cont. from Page 17*

workplace safety and health violations existed at the time of the explosion, as well as a lack of safe industry practices on the part of Ford.

### Violation/Citation Summary

Ford Motor Company has agreed to pay a \$1.5 million penalty for violations of MIOSHA requirements. This agreement ranks as one of the largest monetary settlements for workplace safety and health violations in the nation. CIS Deputy Director Dr. Kalmin Smith was actively involved in forging the Settlement Agreement.

"This historic agreement allows us to focus our efforts on helping Ford and the Union create a safe and healthy workplace in the future—rather than spending our limited resources on litigation," said CIS Deputy Director Smith. "This exceptional compliance resolution minimizes the possibility of a lengthy legal battle, and provides immediate benefit to Ford workers."

The violations found by MIOSHA were mainly associated with: physical controls on the boilers, written operating and maintenance procedures, housekeeping, and employee training. MIOSHA findings led to the inclusion in the Settlement Agreement of several items which will positively impact the working conditions for Ford employees nationwide. MIOSHA expended the necessary resources in this investigation to determine unsafe workplace practices and to identify viable solutions.

### Agreement Highlights

CIS, Ford, and the UAW signed the Settlement Agreement on Sept. 2, 1999. Ford has provided assurance of abatement for the cited conditions and paid the penalty. In addition, Ford has also undertaken the following activities beyond the scope of abatement at the Rouge power plant, with most activities to be initiated within 45 days of the effective date of this Agreement.

#### Safety Improvements in Ford Facilities

Ford will dedicate \$1,500,000 to promote the establishment of programs to achieve lasting improvements in workplace safety and health beyond the Rouge Complex.

#### Occupational Safety and Health

Ford will donate \$1,000,000 to Michigan organizations to conduct research on industrial health and safety. They will also donate \$1,500,000 for research, facilities and/or equipment relating to the treatment of burns or other critical care.

#### Scholarships in Memory of the Deceased

Ford will donate \$1,000,000 to a scholarship fund for the benefit of UAW members and their families in memory of the workers who lost their lives as a result of the power plant incident.

#### Potential Third-Party Litigation Costs

If CIS personnel are required to testify in third-party litigation involving the explosion, Ford has agreed to reimburse the state for the actual salary/wages, fringe benefits, and travel expenses incurred, up to a maximum of \$500,000. ■

## FY 2000 SET Grant Projects

*Cont. from Page 4*

aggression and early prevention; de-escalation and personal safety strategies; and managing high risk situations.

**Covenant Health Care** will develop an ergonomics health and safety program associated with cumulative trauma disorders for small high-hazard employers. Five organizations will be selected from a response-based survey. Each will receive a risk assessment, a plant walk-through and a site-specific education program.

**Eastern Michigan University** will provide a two-day seminar on Fall Protection and Rescue from Heights. Day one will be a Comprehensive Fall Protection training seminar which will provide training for workers. Day two will provide the rescue team with the necessary knowledge, hands-on-training and equipment needed to rescue a fellow worker.

**Grand Rapids Community College** will provide health and safety training to primarily special trades contractors with employees in the plumbing, heating and air conditioning trades. Areas of training will include First Aid and Bloodborne Pathogens; CPR; Confined Space; Lockout/Tagout and Fall Protection; Asbestos Awareness; HazMat training.

**Kalamazoo Valley H/S Training Partners** will provide training for students and workers who have been with their employer less than five years. Training topics will include hazard communication, bloodborne pathogens, proper lifting and ergonomic principles, personal protective equipment, electrical safety lockout/tagout and industry specific awareness.

**Michigan AFL-CIO** will provide statewide safety and health training to students engaged in school to work (STW) based learning and small businesses that are STW worksites. They will provide generic or customized training according to company needs. The training will provide youth entering the workforce with the ability to identify workplace safety and health hazards.

**Michigan Association of Rehabilitation Organization (MARO)** will provide occupational safety and health training for new workers from special populations, including: welfare recipients referred to *Work First!* programs, students with disabilities in special education school to work transition programs, and persons with severe disabilities.

**Michigan Farm Bureau** will provide seminars dealing with Pesticide Drift Management.

The program will provide workplace assessment seminars; hearing conservation principles; and a review of recordkeeping and reporting requirements related to workplace injuries, illnesses, and fatalities.

**Michigan Health and Hospital Association** will continue to implement an ergonomics-related prevention program tailored to individual nursing and personal care facilities. The project focuses on: back injury, shoulder strain, carpal tunnel syndrome, and pinched nerves. On-site ergonomic evaluations and staff training will be provided.

**Michigan Road Builders Association** will provide interactive presentations, workshops and courses for contractors, management, supervisory and line workers. The training will include Heavy/Highway Contractor Safety Administrator Course, Heavy/Highway Contractor Update, Bridge Contractor "Safety Day" Presentations, technical assistance and a quarterly newsletter.

**Michigan State University/Labor Program Service** will provide train-the-trainer courses in Rapid Intervention Team (RIT) training. These trained personnel can then go back to their fire department and train their own employees. The training will be directed to firefighters, their officers, and fire chiefs because all fire service personnel have RIT responsibilities.

**PASSES** will conduct four-hour workshops in four high schools in Wayne County. Students will be trained in hazard recognition and the use of protective equipment. The main focus will be on five high-risk areas: chemical handling, lifting, working alone, operating equipment, and on-the-job rights. They will also train teachers from area high schools, who present the four-hour workshops in their classrooms.

**United Auto Workers (UAW)** will continue to train and develop on-site health and safety committees to implement health and safety programs at small companies. The train-the-trainer approach will be used to conduct site-specific hazard training. The details of technical prevention will be shared with employers and employees in joint sessions.

**University of Michigan, Center for Ergonomics** will distribute and evaluate the introductory ergonomics training module on CD-ROM which was developed during the 1996-97 grant year. A companion study guide will also be distributed. The project will provide technical assistance and training to 12 companies who received the CD-ROM, to assist them in developing and implementing ergonomics programs. ■

## Air Monitoring

### Cont. from Page 7

all of these devices must be calibrated both before and after use. Failure to do so compromises the validity of the samples collected.

### Now we can finally turn on the pump.

But we can't just leave the area and return at the end of the day to collect our samples and equipment. We must remain in the area on a sufficient basis to ensure the equipment is functioning properly, change sampling media as necessary, and prevent samples from being compromised.

Care must be taken when observing monitoring so as not to interfere with how the employee performs the task--we want to evaluate their exposure based upon how they routinely perform the task. Additionally, we must take enough notes about the process as it is being performed so the results can be compared to sample results obtained previously or in the future.

Other information to be obtained during the monitoring process includes evaluating the feasibility of potential control strategies. Such information will be necessary if the monitoring results indicated excessive employee exposures. Can ventilation be installed to reduce air contaminant exposures? What work practices can be modified to reduce employee exposures? What type(s) of personal protective equipment should be used to control exposures? In addition to our concerns about exposure by inhaling the contaminant(s), we must also review the potential for skin exposure and/or ingestion of the substance and how to reduce or eliminate such actions.

Upon the successful completion of monitoring and laboratory analysis, we must next complete the appropriate calculations to properly identify the employee exposures so they can be compared with the regulated (PELs) and recommended exposure limits (TLVs). These calculations convert the laboratory results into a time-weighted average exposure and include the appropriate sampling and analytical error(s) for the process.

In addition to evaluating the employee's exposure to individual chemicals, we also need to evaluate the exposure to the mixture of the chemicals. This is important in situations where the employee is exposed to two or more substances that have similar toxicological effects. Failure to perform this evaluation may lead to erroneous conclusions regarding employee exposures to hazardous chemicals.

Once the comparisons have been made with the PELs and TLVs we can identify whether employees are excessively exposed to the sampled contaminant(s). An employer whose employees are experiencing serious health effects associated with exposure to a substance for which there is no PEL, or where the exposures are occurring at a level below the current PEL but above a recommended exposure limit such as the TLV, may still be liable for citation from their appropriate occupational safety and health regulatory agency.

### Professional help is available.

As you can now see, air monitoring really does require more than just turning pumps on and off. In fact, the information presented here only provides a brief synopsis of the science and art required for the proper evaluation of employee exposures to airborne contaminants.

If you are about to perform such a task in your workplace, make sure you are properly prepared or seek the guidance and/or assistance of a qualified professional. Look to your workers' compensation insurance carrier, as well as private consultants for such assistance. In addition to providing technical advice, the MIOSHA program offers free onsite consultative services for airborne contaminant evaluations. For MIOSHA assistance, call the Occupational Health Division at 517.322.1608.

Once the successful recognition and evaluation of air contaminants has been achieved, the next step is to determine what control strategies are necessary to protect the worker's health--but that begins a whole other article. ■



**Marsha Parrott-Boyle**  
Industrial Hygienist  
Standards Specialist

### New Standards Staff

Marsha Parrott-Boyle is the newest staff member in the Standards Division, as the Industrial Hygienist Standards Specialist, effective Aug. 25, 1999. Ms. Parrott-Boyle has been with MIOSHA for six years. Prior to this position, she was with the Occupational Health Division's Education and Training Unit where she had extensive experience in occupational health education and consultation.

Before joining the public sector, she spent 25 years in the clinical laboratory science field, primarily in the healthcare industry. She is certified as both a Hazardous Material Manager and a Clinical Laboratory Director, with a degree in Human Biology from Oakland University, Rochester, Michigan. In 1991, she completed a Master Certificate degree in Hazardous Waste Management, from Wayne State University's Chemical Engineering Department.

Marsha is looking forward to facilitating the mission of the BSR Commissions and is fundamentally committed to the promotion of workplace health and safety for Michigan workers.

## Wage Hour Digest

Did you know there is a research tool for the Michigan Payment of Wages and Fringe Benefits Act, 1978 PA 390, as amended (Act 390)?

The Wage Hour Digest, published in 1997 under copyright by the State Administrative Board, covers administrative law judge and court decisions. The Digest currently includes:

- 1,353 Digest Entries,
- Subject Index,
- Table of Cases, and
- General Entry Index.

This Digest is an indispensable research tool for anyone involved with Act 390 litigation. An update will be issued in January 2000 to include cases from 1999.

The price for the Digest is \$150 with yearly updates at 25 cents per page. Please contact Terri Schrauben, Office of Hearings, 517.322.1709, to obtain a copy. (In January the price will be \$175.)

## Fireworks Safety

### *Cont. from Page 3*

explained the MIOSHA Standards which are applicable in the fireworks industry, including: fire exits, emergency evacuation plans, lockout/tagout procedures, personal protective equipment, employee training, and a hazard communication program.

■ **Sgt. Bob Mendham**, Detective Sargent, State Police Fire Marshal Division. The Fire Marshal Division reviews requirements for fireworks displays. Sgt. Mendham covered the responsibilities of local government units and the fireworks display professionals they hire.

■ **Sgt. Dave Ford**, Commander, Hazardous Materials Unit, State Police Motor Carrier Division. The Motor Carrier Division regulates the transport of hazardous materials. Sgt. Ford explained the U.S. Dept. of Transportation requirements enforced by the state in the transport of hazardous materials.

■ **Bob Carrier**, Occupational Safety Consultant, MIOSHA SET Division. Carrier gave an in-depth review of Process Safety Management (PSM). Within the industry of highly hazardous materials such as explosives, PSM is part of an organizational method that reduces potential exposures to employees, the public, and the environment.

Michael Morrissey, Division Director, and Jaqueline Darrah, Director of Industry Operations, Detroit Field Division of ATF, and John Brennan, Supervisor, MIOSHA General Industry Safety Division, joined the above participants and served on a panel of experts to respond to questions at the conclusion of the program.

MIOSHA program managers are offering a repeat of this seminar early in the year 2000 and are also planning a second seminar to provide information and training on fireworks displays for municipalities.

For seminar information call the MIOSHA SET Division at 517.322.1809. ■

## How To Contact Us

MIOSHA Complaint Hotline	800.866.4675
Fatality/Catastrophe Hotline	800.858.0397
General Information	517.322.1814

Free Safety Consultation	517.322.1809
Free Health Consultation	517.322.6690

Website: [www.cis.state.mi.us/bsr](http://www.cis.state.mi.us/bsr)

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Consumer & Industry Services  
Bureau of Safety & Regulation  
Director: Douglas R. Earle

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The purpose is to educate Michigan employers and employees about workplace safety and health. This document is in the public domain and we encourage reprinting.

Editor: Judith Keely Simons

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